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IN THE  
**Supreme Court of the United States**

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October Term, 1948

No. ....

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LEROY J. LEISHMAN,

*Petitioner,*

*vs.*

THE RICHARDS & CONOVER COMPANY,

*Respondent.*

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**PETITION FOR WRIT OF CERTIORARI.**

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*To the Honorable Supreme Court of the United States:*

Your petitioner respectfully shows:

**Summary Statement of Matter Involved.**

**A. BRIEF HISTORY OF THE LITIGATION CULMINATING  
IN THE PRESENT CONFLICT.**

This proceeding arises out of a patent infringement suit brought in the Western District of Oklahoma by petitioner against respondent, The Richards and Conover Company, alleging infringement of claims 7 to 11 of petitioner's U. S. Patent No. Re. 20,827 through the sale of Motorola radio receiving sets manufactured by the Galvin Manufacturing Company and containing automatic push button tuning devices made by the Radio Condenser Company and General Instrument Corporation.

The patent here involved is a simple one having a specification of only three columns. Yet the patentee-

petitioner has been unable in ten years of litigation to have the issues of validity and infringement authoritatively adjudicated. The same five claims have been the subject of four infringement suits. As matters now stand, the patent is valid but not infringed in the Ninth Circuit, but would, if valid, be infringed in the Tenth Circuit. The Ninth Circuit case of *LeRoy J. Leishman v. Radio Condenser Company and General Instrument Corporation* is at present the subject of a Petition for Rehearing of Order on Petition for Writ of Certiorari, Case No. 372, October Term, 1948.

The first of the said four cases was that of *Leishman v. Associated Wholesale Electric Company*, considered by this Honorable Court in 318 U. S. 203, in which this Honorable Court granted certiorari to interpret Rule 52b, F. R. C. P., as to whether the appeal was taken in time, but denied certiorari to review the case after the appellate court acted upon the appeal (320 U. S. 794). The fourth case was filed against petitioner under the Declaratory Judgment Act by General Motors Corporation in the United States District Court for the Southern District of California, Civil Action 5781-M, where Presiding Judge McCormick, having tried the case, is withholding his opinion to see whether this Honorable Supreme Court decides the issues of validity and infringement in this case and *Leishman v. Radio Condenser, et al.*, Supreme Court, Case No. 372.

The confused situation that now requires the supervisory attention of this Honorable Court, can best be presented if petitioner first sets forth the relationship of this case to the previous two.

In the first case (*Leishman v. Associated Wholesale Electric Co., supra*) the lower court held that the claims



were invalid for want of invention. (36 Fed. Supp. 804, 809.) On appeal, after this Honorable Supreme Court ruled that the appeal was timely, the Court of Appeals for the Ninth Circuit wiped out the holding that the claims were invalid for want of invention, but held that infringement was avoided because the accused tuners were operated by plungers instead of levers as shown in the patent.

Inasmuch as this Honorable Court has said in Rule 38 (5b) and elsewhere that it will review patent cases when a conflict develops between circuit courts of appeals, petitioner then undertook to develop such a conflict by filing the instant action in the United States District Court for the Western District of Oklahoma, alleging infringement by push button radio tuners that were patentwise the same as those accused in the Ninth Circuit case of *Leishman v. Associated Wholesale Electric Company, supra*, in which the appellate court held that the substitution of plungers for levers avoided infringement.

The manufacturers of the devices involved in the Oklahoma action then endeavored to prevent petitioner from obtaining an independent adjudication outside the Ninth Circuit, and these manufacturers accordingly filed the third suit, *Radio Condenser Company, et al. v. Leishman*, which was a Declaratory Judgment Action. In that case a summary judgment of non-infringement was requested on the ground that the earlier decision in the *Associated* case, *supra*, although not *res adjudicata*, was nevertheless *stare decisis*.

Before the lower court in that case acted in the summary judgment proceeding, the trial of the instant case was held, and the trial court held the claims *clearly valid and clearly infringed*.

Subsequent to the entry of the lower court's judgment herein, the lower court in *Radio Condenser Company, et al. v. Leishman* granted the motion for a summary judgment of *non-infringement* on the basis that the *Associated* decision, *supra*, was controlling. This judgment was affirmed by the Court of Appeals for the Ninth Circuit, which re-affirmed its opinion in the *Associated* case, *supra*. The summary judgment case of *LeRoy J. Leishman v. Radio Condenser Company and General Instrument* (167 F. 2d 890) is currently the subject of a Petition for Rehearing of Order on Petition for Writ of Certiorari, Case No. 372, October Term, 1948.

In the instant case, the Court of Appeals for the Tenth Circuit reversed the lower court on the issue of validity, but supported the lower court's views on infringement, as fully set forth in the argument in the Brief in Support of the Petition for Rehearing of Order on Petition for Writ of Certiorari, pages 15 to 18, Case No. 372, *supra*.

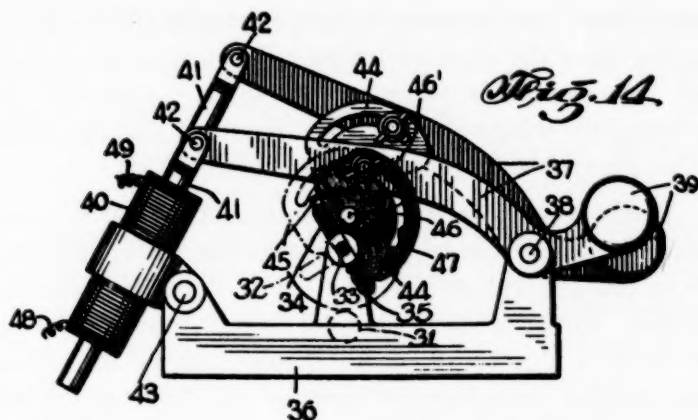
As previously stated herein, the claims are thus valid but not infringed in the Ninth Circuit, but would, if valid, be infringed in the Tenth Circuit. The issue of infringement is accordingly raised in the petition for a writ of certiorari in the Ninth Circuit case, while the present petition is concerned with the issue of validity.

#### B. THE SUBJECT MATTER OF THE PATENT IN SUIT.

The patent here at issue pertains to automatic push-button tuning devices for radio receivers. The type of push-button tuner covered by the claims here at issue is used in the radio receivers installed by automobile manufacturers in all current models of radio-equipped automobiles excepting Packard, Studebaker and certain models in the Chrysler line.

The five claims that have been involved in the four infringement suits previously mentioned, cover the features of the invention that make push-button radio tuners easy to adjust or "set" so that the subsequent operation of the buttons will tune in the desired stations accurately.

The difficulty that needed to be overcome in order to permit easy setting, is well illustrated in a prior art tuner shown in the Marschalk patent cited by respondent and appearing in the record in Volume II, pages 415 *et seq.* For the convenience of the Court, Fig. 14 from this patent is reproduced on this page. This device employs a rocker 34 (colored green) mounted on a shaft 33 which is operatively connected to the rotatable tuning control of the radio set. This rocker assumes a different tilt, or angular position, according to what station is tuned in. In order



automatically to give this rocker the particular tilt required for a given station, Marschalk employs an adjustable tappet 44 (shown in red). This tappet may be loosened for adjustment purposes by loosening the wing-nut 46'. The next step in the "setting" or adjusting

process, is to tune in the desired station carefully by means of the regular manual knob (not shown). This causes the rocker 34, colored green, to assume a definite angular position. After the rocker has thus been accurately positioned, the operating lever 37 is pressed down so that the tappet 44 engages the rocker and assumes the same angular position. But if the rocker is near either of its extreme tilted positions, such as those shown respectively in full lines and dotted lines in the figure, *the rocker and tappet will both immediately "creep" away from the tilted position and tend to become horizontal.* Great care must accordingly be used in setting Marschalk's tappet. Sufficient pressure must be exerted on the operating lever to assure that the tappet or adjustable means 44 will assume the exact angular position of the rocker, yet a slight excess pressure will immediately destroy the careful setting of the rocker. A variation of a small fraction of one degree will destroy the accuracy of the adjustment. [R. 61-62.] If the operator is fortunate not to have disturbed the setting, the wing-nut 46' may be tightened and the tappet thus clamped in its proper adjusted position.

It will be obvious that any subsequent operation of the lever will cause the tappet to engage the rocker and turn it to the angular position for which the tappet was adjusted. But if the tappet has not been accurately adjusted, or if there was the slightest movement during the adjusting process, the subsequent operation of the lever will not tune in the station properly.

Various workers in the art endeavored to provide a satisfactory adjustable tappet tuner from 1928 until the issuance of petitioner's patent in 1938. Their devices either required many extra parts or involved tedious methods of adjustment.

Petitioner eliminated creeping by the mere shape and relationship of the rocker and tappet, which were mutually arranged so that one could nest within the other in the fully engaged position in order that their axes of rotation might become coincident, or *coaxial*. This is shown in Fig. 2 of the patent [R. 261] and described in the specification on page 264, lines 30 to 34. This structure was immediately adopted on a large scale, and approximately eight million such tuners were manufactured prior to April, 1942, when the manufacture of commercial radio receivers was stopped by federal order to facilitate concentration on the defense program.

#### C. THE OPINIONS OF THE COURTS RESPECTING VALIDITY.

In the first suit in which the claims here at issue were involved, the trial court misunderstood the nature and purpose of the coaxial relationship and held the claims invalid for want of invention, saying:

"Coaxial, simply means on-center and is some times referred to as concentric or symmetrical. The importance of the mechanical relationship is well known in the art and a feature that must be considered in all machine designing when you desire parts to move together harmoniously and free from friction. The same principle is used in the crank shaft of any automobile. It is a mechanical principle that is hundreds of years old." (36 Fed. Supp. at 808.)

On appeal, petitioner showed the Court of Appeals for the Ninth Circuit that *coaxial* is not synonymous with *on-center*, *concentric* or *symmetrical*; that the coaxial

relationship requires the coincidence of two independent axes of rotation; that the same principle is *not* used in the crank shaft of an automobile, which has *only one axis*; and that the old uses of coaxiality “when you desire parts *to move together harmoniously and free from friction*” are of no pertinence here, because coaxiality is used in the patent in suit for the *diametrically opposite* purpose of *preventing absolutely all rotation*. The Court of Appeals accordingly said:

“\* \* \* The judgment declares that the claims ‘are invalid for want of invention.’ In the view we take, the declaration is unnecessary. As to its correctness or incorrectness, we express no opinion.

“The judgment is modified by striking therefrom the above quoted declaration . . . .”

*Leishman v. Associated Wholesale Electric Co.*, 137 F. 2d 722, at 727, 728.

While this opinion of the Court of Appeals for the Ninth Circuit thus did not specifically reverse the lower court, it had the same effect, for it restored the presumption of validity to the patent. Furthermore, it must be assumed that the findings of the lower court, which dealt only with the issue of invention, were clearly in error, because Rule 52a requires that the trial court’s findings must not otherwise be disturbed.

The U. S. District Court for the Western District of Oklahoma in *Leishman v. The Richards and Conover Company*, Civil Action No. 2155, subsequently held these claims to be *clearly valid* and clearly infringed by tuners

that were patentwise the same as those accused in the *Associated* case, *supra*. [Finding of Fact 6, R. 29.]

On appeal, the Court of Appeals for the Tenth Circuit rendered two opinions reversing the trial court in Oklahoma on the single issue of validity.

In the first of these two opinions [R. 497 *et seq.*], the appellate court recognized that the purpose of the coaxial relationship was to prevent unwanted movement at the time of adjustment, but held the claims invalid because

“The principle of coaxial relationship and its importance where it is desired that two parts of a machine operate together harmoniously, has been within the knowledge, for many years, of ordinary mechanics skilled in the art.”

Petitioner asked for a rehearing [R. 513 *et seq.*], pointing out that petitioner's *diametrically opposite* use of a coaxial relationship *to prevent movement*, was not within the knowledge of ordinary mechanics skilled in the art.

The Court of Appeals for the Tenth Circuit then rendered another opinion [R. 576] assertedly explaining the first, but in this second opinion the court ignored the expert testimony of both sides and based its opinion upon incorrect and irrelevant dimensions and relationships in erroneous analytical drawings made by the court. These drawings contain errors so serious that it is impossible to use them as a proper basis for an opinion. These errors, once pointed out, are obvious, and are called to the Court's attention in the Argument in the appended brief.

## **The Supreme Court Has Jurisdiction to Review the Decision of the Court of Appeals for the Tenth Circuit.**

Petitioner relies upon Section 240 of the Judicial Code, corresponding to Title 28, U. S. C. A., paragraph 1254, and also Rule 38(5b) of the Rules of the Supreme Court.

### **The Question Presented.**

1. Are claims 7 to 11 of Reissue Patent No. Re. 20,827 invalid for want of invention?

### **Reasons Relied Upon for Allowance of the Writ.**

1. The action of the Court of Appeals for the Tenth Circuit in reversing the lower court's holding that claims 7 to 11 of Reissue Patent No. Re. 20,827 are valid, and in ruling that these claims are invalid for want of invention, has created a situation that is in conflict with the situation in the Ninth Circuit where the Court of Appeals in *Leishman v. Associated Wholesale Electric Company*, 137 F. 2d 722, at 727-728, struck out the holding of the lower court that these claims were invalid for want of invention and thus restored the presumption of validity to the patent.

2. The two opinions of the Court of Appeals for the Tenth Circuit herein are not proper judicial determinations of the issue of invention, and contain serious judicial errors that are apparent upon the face of the opinions themselves.

a. In correctly explaining in its first opinion that coaxiality of the tappet and rocker is for the purpose



of *preventing movement*, and then ruling that no invention is involved because the coaxial relationship has been known for many years "where it is desired that two parts of a machine *operate together harmoniously*," the appellate court failed to distinguish between two things that are *diametrically opposite*.

b. In its second opinion, purporting to explain the first, the appellate court based its reasoning upon seriously incorrect measurements in improper drawings prepared by the Court.

3. The method used by the Court of Appeals of the Tenth Circuit in arriving at its opinion with respect to invention, is a departure from established practice and not in conformity with the methods followed and approved by this Honorable Supreme Court.

a. The appellate court ignored the admissions of the expert witness opposing the patent, brushed aside the arguments that respondent advanced against validity, and proceeded *sui sponte* and incorrectly to analyze the problem solved by petitioner's combination.

**Prayer for the Issuance of the Writ.**

Wherefore, your petitioner prays that a writ of certiorari issue under the seal of this Court, directed to the Court of Appeals for the Tenth Circuit, commanding said Court to certify and send to this Court a full and complete transcript of the record and proceedings of the said Court had in the case numbered and entitled Docket No. 3577, *The Richards and Conover Company*, appellant, *v. LeRoy J. Leishman*, appellee, to the end that this cause may be reviewed and determined by this Court as provided by the statutes of the United States; and that the judgment herein of said Court of Appeals for the Tenth Circuit be reversed by this Honorable Court, and for such other relief as to this Court may seem proper.

Dated this 25th day of February, 1949.

LEROY J. LEISHMAN,

By JOHN FLAM,

*Counsel for Petitioner.*

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**Certificate.**

This petition is in my judgment well founded, and is not interposed for delay.

JOHN FLAM,

*Counsel for Petitioner.*

IN THE  
**Supreme Court of the United States**

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October Term, 1948.

No. ....

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LEROY J. LEISHMAN,

*Petitioner,*

*vs.*

THE RICHARDS AND CONOVER COMPANY,

*Respondent.*

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**BRIEF IN SUPPORT OF PETITION.**

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**I.**

**Publication of Opinions of Lower Courts.**

The opinion of the District Court was an unreported memorandum opinion, but the findings of fact may be found in Vol. I, page 28 *et seq.*

The two opinions of the Court of Appeals for the Tenth Circuit, 79 U. S. P. Q. 316 and 80 U. S. P. Q. 338, appear in Vol. II of the record beginning on pages 497 and 576, respectively.

II.

**Argument.**

In case No. 372, October Term, 1948, the Petition for Rehearing of Order on Petition for Writ of Certiorari showed that there is a conflict between the Courts of Appeals for the Ninth and Tenth Circuits with respect to the infringement of the instant patent by the very same devices. The present petition has shown that there is also a conflict between these two appellate courts regarding the validity of the claims here at issue. This Honorable Supreme Court's policy of resolving such conflicts is too well known to require the citation of authorities.

The reasons relied upon for allowance of the writ in the instant case includes the following cogent additional reason why this Honorable Court should review the opinions of the Court of Appeals for the Tenth Circuit on the issue of validity:

"2. The two opinions of the Court of Appeals for the Tenth Circuit herein are not proper judicial determinations of the issue of invention, and contain serious judicial errors that are apparent upon the face of the opinions themselves."

It was shown in the statement of the case in the foregoing petition that the first of these two opinions based the holding of invalidity upon the paradoxical contention that no invention is involved in petitioner's use of a coaxial relationship to *prevent* rotation because this relationship has long been used to *facilitate* harmonious movement. The impropriety of this first opinion is thus apparent upon its face and needs no supporting argument.

The appellate court's second opinion, rendered after the rehearing, comes squarely within the provisions of

Rule 38, subdivision 5(b) of this Honorable Court, which permits a review on Writ of Certiorari where a Court of Appeals "has so far departed from the accepted and usual course of judicial proceedings, \* \* \* as to call for an exercise of this court's power of supervision."

The present case exemplifies just this condition. The Court of Appeals for the Tenth Circuit, in rendering its opinion on rehearing, dated January 20, 1949 [R., Vol. II, p. 576 *et seq.*], is palpably very much in error.

It is not permissible for an appellate reviewing court to improvise, or to attempt, a new technical explanation of the behavior of a mechanical device, and which is contrary to all the testimony of the expert witnesses. And this is all the more improper where this new court-made theory is made the basis of a reversal of the lower court on a fact issue.

The Court of Appeals exhibits an utter disregard of all of the said expert testimony—testimony that amounted to serious and conclusive admissions on behalf of the appellant.

Substantially the entire opinion is an attempted explanation of the mode of operation of the prior art device shown in the Marschalk patent discussed in the Statement of the Case in the foregoing petition. The Court's volunteered analysis of the reasons for "creeping" in Marschalk's device are obviously and clearly wrong.

On page 2 of the opinion [R., Vol. II, p. 577], the Court says:

"On rehearing, counsel for Leishman urged that the cause of creeping in Marschalk's device is obscure; and that neither such cause nor the solution of the problem would readily occur to a mechanic skilled in the art."

The court then refers to two figures prepared by the court and appearing on page 578 of the record. These figures are intended to illustrate the Marschalk device; the rocker I, tappet J, lever H, and pin A for the tappet are intended to represent the corresponding parts 34, 44, 37, and 46, respectively, in Marschalk.

The opinion then goes on to explain why there is "creeping" in such a device. It stresses, for example, the relative positions of pin A and an imaginary line XY, a line having no counterpart in Marschalk; nor does the Marschalk tappet have an apex that falls in any imaginary line. No reason is given why such a relation of the pin A, line XY, and the apex of tappet G is important; in fact, there is no pertinence to it whatever.

In order more readily to point out other serious errors in the appellate court's procedure, the drawings from the opinion are reproduced on the folding insert at the back of this brief, where additional lines have been superimposed upon the Court's figures for purposes of explanation.

On page 579 of the record, the opinion says:

"When the rocker and the tappet are positioned as in figure 1, pin A is a greater distance above the axis of the rocker shafts and a greater distance to the right of the vertical line XY than when the rocker and tappet are positioned as in figure 2."

This condition, to which the Court later attaches great significance, is apparent only because the Court has made grievous errors in its drawings that a mechanic would never make. It will be noted that the Court has inadvertently placed the pin A in the wrong place in its Fig. 1. The tappet, of course, could not change its construc-

tion in turning from the position shown in Fig. 2 to the position shown in Fig. 1. The pin A would, accordingly, be *exactly the same distance* away from the lower edge of the tappet in both Figs. 1 and 2. To demonstrate the serious error that misled the Court, a circle has been drawn around the pin A in Fig. 2 on the insert at the back of this brief, the circle being of such size that its lower edge comes exactly to the edge of the tappet. A circle of exactly this same size has been drawn around the pin A in the Court's Fig. 1. *It will be noted that this circle comes a very long way from the edge of the tappet.* This large error in the Court's drawing is what makes the axis of the tappet and the axis of the rocker seem so much further apart in its Fig. 1 than in its Fig. 2.

To show that the Court's conclusions about these axes are largely the result of the serious errors that it has made in endeavoring to simulate what a skilled mechanic would do, the tappet and rocker of Fig. 1 have been properly redrawn as Fig. 3 between the two figures from the opinion. It will be noted that the rocker is tilted at exactly the same angle as in the Court's Fig. 1, but the tappet has been correctly drawn so that the pin A is precisely the same distance from the lower edge of the tappet as it is in Fig. 2, as shown by the circle around the pin. When the figure is thus accurately laid out, *the variation in the distance between the axis of the tappet and the axis of the rocker in Figs. 2 and 3 is barely discernible.* Yet the grave incongruity in *the Court's* drawing is made the important reason assigned by the Court for the "creeping," for the Court says (page 580):

"Since the more the rocker is tilted [as in Fig. 1] the greater becomes the non-coaxiality between the axis D of the rocker shafts and pin A and the greater becomes the tendency of the rocker to creep,".

All these glaring errors are further aggravated by the statement at page 581:

"Counsel for Leishman contend it is manifest that the cause of creeping is obscure because an expert witness for the defendant below testified that if the line of thrust from pin A is either to the left or right of the axis of the rocker shafts, creeping will occur, and that Leishman's physical exhibits 26, 26A, 26B, and 26C demonstrate that if pin A is not coaxial with the rocker shafts, although the pin travels downward in a line of thrust which intersects the axis of the rocker shafts, creeping will still result.

"It is obvious that when the expert so testified he was talking about a force from pin A traveling along a straight line. In Marschalk's device, pin A travels in an arc."

As a matter of fact, the expert witness *was* talking about Marschalk; this testimony occurs at page 213 of Vol. 1 as follows:

"Q. When the force is applied by operation of the lever 37 in Figure 14 of Marschalk, it is always applied to the left side of that pivot 33, is it not, on account of the location of the pins, 46, upon which the tappet is mounted? A. The direction of the force that will cause creeping can be found in the following manner: Draw a straight line from pivot 38 to pivot 46. Then draw another line at right angles to that line through pivot 46. The force will lie along that perpendicular line. If it falls to the left of pivot 33 then the rotation of the rocker will be counter clockwise. If the perpendicular line on the other one falls to the right of pivot 33, then there will be clockwise motion."



The opinion is interlarded with other incorrect statements. It is stated, for example, on page 580, that the lever from point B to pin A is longer than the lever from point O to pin A (point O is not even marked on the diagram, but it evidently coincides with the point C). Apparently the opinion attaches significance to the fact that the right-hand edge of the tappet in Fig. 1 overlaps the rocker edge, making line AC shorter than line AB. Even if these "lever arms" were identical, creeping would yet occur. This was amply demonstrated to the Court of Appeals by the aid of Exhibits 26a, b, c, and d. This series of exhibits includes a rocker similar to rocker I, a tappet similar to petitioner's tappet, and a tappet which has an axis non-coaxial with the rocker axis when the tappet and rocker are in full engagement. Although both sides of the latter tappet extend completely beyond the edges of the rocker I, creeping nevertheless occurs, and can be demonstrated by the aid of these models. The Court of Appeals is therefore incorrect in attaching significance to an inconsequential and immaterial feature, that is, that the right-hand edge of the tappet J in Fig. 1 extends beyond the edge of the rocker I.

A procedure of this sort by a reviewing tribunal, leading to a reversal of a fact finding of the District Court, is contrary to proper judicial procedure. The lower court had found the claims of the patent clearly valid and clearly infringed. This appears in the Record, Vol. 1, page 29, Finding 6.

"Claims 7, 8, 9, 10, and 11 of the reissue patent No. 20,827 are clearly valid, and clearly infringed."

In spite of this unequivocal fact finding by the District Court, the Court of Appeals substituted its own *new* findings of a highly technical nature. These *new*

technical findings have no support whatever in the record, and are tantamount to the complete discarding of the expert evidence in the case.

Actually, the causes of "creeping" were obscure and defied analysis until the petitioner taught the remedy for the difficulty.

An appellate court of review is not permitted to reverse a case on the basis of a newly advanced theory never urged before. See, for example, *Thomas et al. v. Taylor*, 224 U. S. 73, 56 L. Ed. 673. In that case, appellants urged that the reviewing court should have reversed the trial court so as to permit appellants to introduce evidence in support of a different theory of the cause of action. This Honorable Court, at page 84, however, stated:

"Besides, judgment cannot be reversed upon the mere suggestion that, upon some other theory than that upon which the case was tried, evidence might have been introduced which might have changed the result."

The present case is a greatly aggravated instance, for the new evidence was actually furnished by the reviewing tribunal itself; nor was there even any intimation at the hearings that such an analysis of the "creeping" difficulty would ever be attempted by the reviewing court.

Had an expert, at the proper time and place, offered evidence of this character, petitioner would have been able to exercise his right of cross-examination. Such cross-examination would have demonstrated the utter untenability of such assertions. But this right has been denied to petitioner.

There are numerous instances in which this Honorable Court reversed a decision or opinion that is clearly wrong on its face, as here. Of many of these decisions, the

following might be cited: *Reynolds v. United States*, 222 U. S. 443, 54 S. Ct. 800, 78 L. Ed. 1353. This case involved the question of the right of a veteran to receive all of his pension, without deductions for hospitalization. Although the question was not of great public importance, yet, because of the obvious errors in the decision, this Honorable Court reversed it.

Of similar import are *Southern Railway v. Walters*, 284 U. S. 190, 52 S. Ct. 58, 76 L. Ed. 239; *Stringfellow v. Atlantic Coast Line*, 290 U. S. 322, 54 S. Ct. 175, 78 L. Ed. 339; *Van Der Weyde v. Ocean Transport Co.*, 297 U. S. 114, 56 S. Ct. 392; *Alford v. United States*, 282 U. S. 687, 51 S. Ct. 218, 75 L. Ed. 624; and *McBoyle v. United States*, 283 U. S. 25, 51 S. Ct. 340, 75 L. Ed. 816.

Should this wrong decision be left to establish a precedent, then any reviewing court may disregard the entire record of expert testimony, and may volunteer its own inaccurate expert evidence.

### Conclusion.

Because of the conflict between the Courts of Appeals for the Ninth and Tenth Circuits hereinbefore set forth, and because of the departure of the latter court from established and proper judicial procedure, it is respectfully submitted that this case is one calling for this Court to resolve the conflicts and to exercise its supervisory powers by granting a writ of certiorari and thereafter reviewing and reversing the decision of the court below.

LEROY J. LEISHMAN,  
*Petitioner,*

By JOHN FLAM,  
*Counsel for Petitioner.*

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**FILED**

**APR 4 1949**

**CHARLES ELMORE CROPLEY**  
CLERK

IN THE  
**Supreme Court of the United States**

OCTOBER TERM, 1948.

—  
No. 612.  
—

LEROY J. LEISHMAN, *Petitioner,*

v.

THE RICHARDS AND CONOVER COMPANY, a Corporation,  
*Respondent.*

—  
**BRIEF FOR RESPONDENT.**  
—

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## CASES CITED.

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Anchor Co., Inc. v. Commissioner of Internal Revenue, 42 F. 2d 99, 100, (C. C. A. 4).....	3-4
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IN THE  
**Supreme Court of the United States**

OCTOBER TERM, 1948.

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No. 612.

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LEROY J. LEISHMAN, *Petitioner*,

v.

THE RICHARDS AND CONOVER COMPANY, a Corporation,  
*Respondent*.

---

**BRIEF FOR RESPONDENT.**

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In this case petitioner relies upon Rule 38(5b) of the Rules of this Court in support of his petition, but it is submitted that the instant case presents no reason or ground for the grant of certiorari such as required by the rule. Contrary to petitioner's assertion, there is no conflict of decision between the Courts of Appeal for the Ninth and Tenth Circuits with respect to the validity or infringement of the reissue letters patent (Re. 20,827) in suit.

The validity of the reissue patent in suit was first determined in the District Court for the Southern District of California and the patent held invalid for want of invention. *Leishman v. Associated Wholesale Electric Co.*, 36



F. Supp. 804. Upon appeal from that decision, the Court of Appeals for the Ninth Circuit found the patent not infringed and did not pass upon its validity, saying:

“ \* \* \* The judgment declares that the claims ‘are invalid for want of invention.’ In the view we take, the declaration is unnecessary. As to its correctness or incorrectness, we express no opinion.” *Leishman v. Associated Wholesale Electric Co.*, 137 F. 2d 722, 727.

In the instant case, the patent has been held invalid by the Tenth Circuit Court of Appeals for want of invention (R., p. 497, and on rehearing R., p. 576), the court reversing the decision of the District Court for the Western District of Oklahoma. There is therefore no conflict between the Ninth and the Tenth Circuits as to the validity of the reissue patent in suit.

The Ninth Circuit has twice held that the reissue patent in suit is not infringed by tuners of the identical type involved in the instant case. Following its first decision in *Leishman v. Associated Wholesale Electric Co.*, 137 F. 2d 722, the Ninth Circuit reiterated its decision in *Leishman v. Radio Condenser Co., et al*, 167 F. 2d 890. In the instant case, the Court of Appeals for the Tenth Circuit has elected to base its decision on its finding that the reissue patent in suit was invalid for want of invention. It did not hold the patent infringed, saying only (R., p. 502):

“ \* \* \* we are unwilling to rest our decision on the narrow ground that the lever in the device of the patent in suit and the plunger in the accused device are not mechanical equivalents.”

This is not a statement that the court considers the patent to be infringed.

This Court has but recently had before it petitioners' claim that there is a conflict between the decisions of the Ninth and Tenth Circuit Courts of Appeal in the above mentioned cases, and in denying petitioner a writ of cer-

tiorari in *Leishman v. Radio Condenser Co. and General Instrument Corp.*, No. 372 (rehearing denied, February 28, 1949), has in effect disposed of that claim. All of the decisions of the Ninth Circuit, and of the Tenth Circuit Courts of Appeal, now referred to by petitioner were before this Court when the rehearing was denied petitioner on February 28, 1949 (*supra*). In the absence of any such conflict, the petition in the instant case should be denied. *Layne & Bowler Corp. v. Western Well Works*, 261 U. S. 387, 43 S. Ct. 442; *Keller v. Adams-Campbell Co.*, 264 U. S. 314, 44 S. Ct. 356.

The alleged mechanical errors in the illustrative diagram accompanying the opinion of Judge Phillips on rehearing, if they were material which they are not, would obviously not furnish a basis for the grant of a writ of certiorari in the instant case. The instant case presents no novel question of patent law but only the application of settled principles of patent law to the facts as found by the court below. This court should not be called upon to review the determinations of mechanical fact by the Circuit Court below, and by the judge in the Southern District of California (36 F. Supp. 804). In his opinion on rehearing, Judge Phillips has set forth a mechanical analysis showing that the cause of creeping in a tuner would be apparent to a skilled mechanic and accompanied that analysis with an illustrative drawing. This involved no novel theory such as claimed in petitioner's brief, and none of the cases referred to in petitioner's brief apply to such a factual analysis. (See *Thomas v. Taylor*, 224 U. S. 73, 32 S. Ct. 403, cited but misapplied by petitioner)

It is idle for petitioner to assert that Judge Phillips disregarded the testimony of an expert in this case. Judge Phillips did not do so, but it was within his province to do so if he desired. It is elementary that the opinion of an expert is advisory only and that a court is free to reject such an opinion if the judge does not agree with it. *The Conqueror*, 166 U. S. 110, 132, 17 S. Ct. 510; *Anchor Co., Inc.*

*v. Commissioner of Internal Revenue*, 42 F. 2d 99, 100, (C. C. A. 4); *Tracy v. Commissioner of Internal Revenue*, 53 F. 2d 575, 577 (C. C. A. 6); *Wisconsin Alumni R. Foundation v. George A. Breon & Co.*, 85 F. 2d 166, 171 (C. C. A. 8); *Conmar Products Corp. v. Universal Slide Fastener Co.*, 172 F. 2d 150, 153 (Item (1)) (C. C. A. 2).

Respectfully submitted,

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**MAY 20 1948**

**CHARLES ELMORE**

**IN THE  
Supreme Court of the United States**

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**October Term, 1948.**

**No. 612**

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**LEROY J. LEISHMAN,**

*Petitioner,*

**vs.**

**THE RICHARDS & CONOVER COMPANY,**

*Respondent.*

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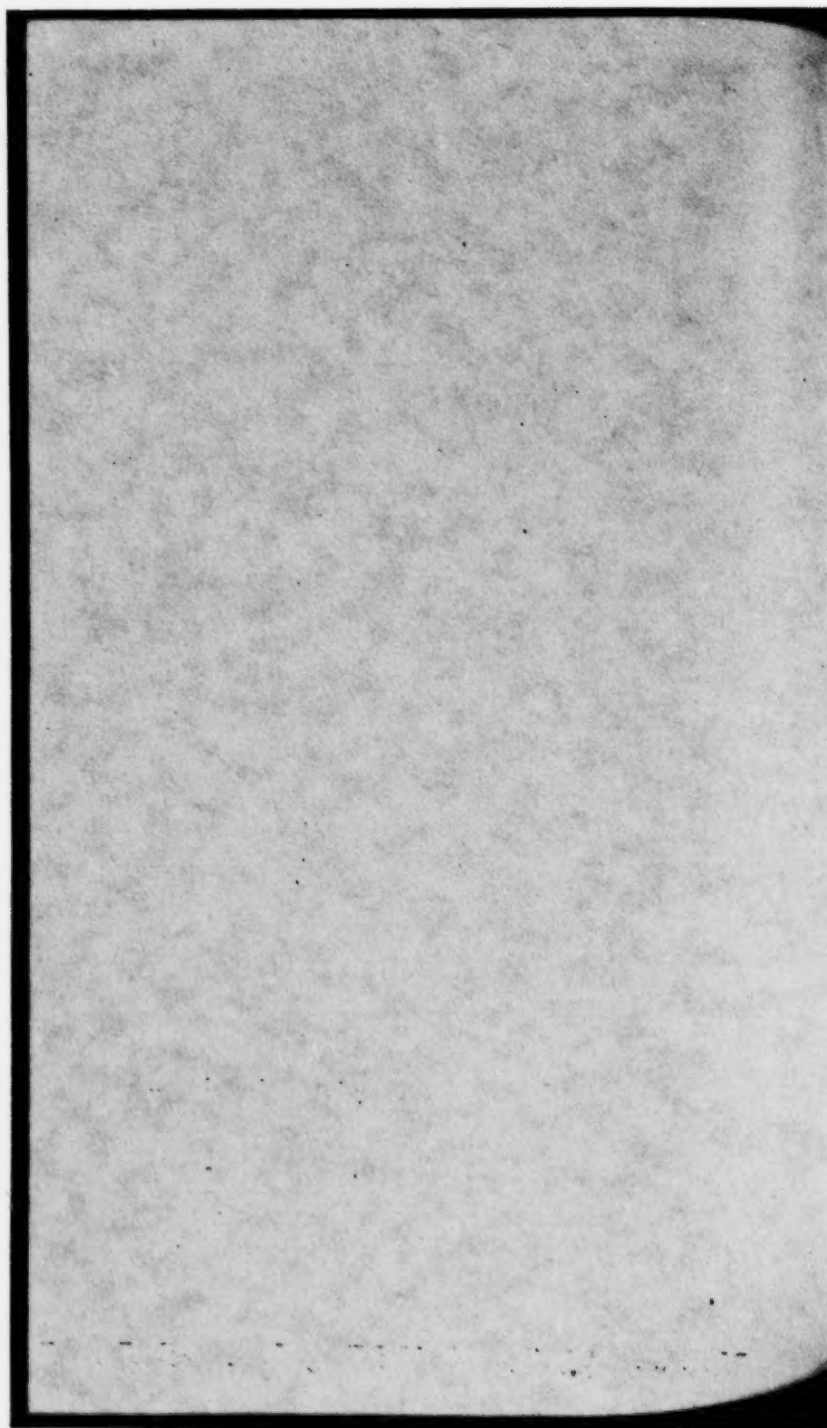
**PETITION FOR REHEARING OF ORDER ON  
PETITION FOR WRIT OF CERTIORARI.**

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**2978 Wilshire Boulevard, Los Angeles 5,**

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8. Had the appellate court not improperly reversed the lower court on the issue of validity, it is clear from footnote 3 of the appellate court's first opinion that it would have held the claims infringed, thus creating strong grounds for a review by this Honorable Supreme Court of a Ninth Circuit opinion in which the tuners here accused were held not to infringe because they are operated by plungers rather than levers.....	38
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---

**PETITION FOR REHEARING OF ORDER ON  
PETITION FOR WRIT OF CERTIORARI.**

---

I.

**PETITION.**

*To the Honorable Supreme Court of the United States:*

On the additional grounds hereinafter set forth, petitioner hereby petitions this Honorable Supreme Court for a rehearing of the order denying his petition for a writ of certiorari in the above entitled case.

On April 28, 1949, Mr. Justice Wiley Rutledge extended the time for filing this petition for rehearing to and including May 21, 1949.

## II.

### ADDITIONAL REASONS RELIED UPON FOR ALLOWANCE OF THE WRIT.

1. Examination and comparison of the appellate court's plurality of decisions on this one appeal<sup>1</sup> reveal that the appellate court's reversal of the lower court was the result of serious errors due to an inadequate and superficial consideration of the subject and to a total disregard of the lower court's findings of fact.

a. The initial hearing of the appeal herein was held on the same day as the hearing in the unrelated case of *Harris et al., doing business as H-C Products Company, v. National Machine Works, Inc., et al.*, 79 USPQ 320. The *Harris* case involved the validity and infringement of a patent to one Gerner. Both petitioner Leishman and Gerner employed means to bring about a **coaxial relationship** between parts—but in different devices, and for totally different and opposite purposes. In the instant case, having to do with push button radio tuners, the coaxial relationship was put to the novel and unorthodox use of **preventing** movement. Gerner, on the other hand, used the **coaxial** relationship for the **opposite** and **conventional** purpose of enabling two parts (the stub shaft and drive shaft of an automobile) to **operate together harmoniously**. The latter use was held to be old, the appellate court saying in its first decision in the instant case (79 USPQ 316 at 320):

“The principle of coaxial relationship and its importance, where it is desired that two parts of a ma-

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<sup>1</sup>The first of these three decisions was published in 79 United States Patent Quarterly 316. The second decision is an altered version of the first, and appeared later in 172 F. 2d 365, along with the third decision which was rendered after a rehearing.

chine **operate together harmoniously**, has been within the knowledge, for many years, of ordinary mechanics skilled in their art."

On this premise, the appellate court held that Leishman's conception "would involve the exercise of mere mechanical skill." **But it wasn't Leishman** who used a coaxial relationship "where it is desired that two parts of a machine **operate together harmoniously**." It was **Gerner**, whose case was heard following Leishman's; and Gerner's device was held to involve invention. Leishman used a coaxial relationship for the opposite, unorthodox and unprecedented purpose of **preventing movement**. Had the appellate court considered the lower court's findings of fact, this confusion between these opposite uses of coaxiality could not have occurred, for the trial court made the following findings on this very point [R. 30]:

"13. The **coaxial relationship** between the axis of the tappet, or adjustable means, and the axis of the rocker **is for the purpose of preventing any rotation whatever** of the adjusted tappet and rocker during the adjusting process. Coaxiality has been used **in the past** for the **opposite** purpose of **permitting parts to move freely** and without binding.

"14. The defendant presented no example of the use of a coaxial relationship that was at all analogous to the use made of this relationship in the combination set forth in the claims of the reissue patent in suit; and defendant's expert, Dr. Spotts, stated on cross-examination **that he knew of no instance in which a coaxial relationship had been used for a similar purpose.**" (Emphasis added.)

b. The first decision herein shows that the court was also confused between petitioner's tuner and the prior-art tuner of Marschalk. Of Leishman's tuner, the court said (79 USPQ 316 at 318): "Adjustment is effected by loosening a wing nut on a setscrew mounted on the lever and extending through a recess in the tappet, . . . ." **THERE IS NO WING NUT IN LEISHMAN'S TUNER, AND NO RECESS IN HIS TAPPET.** The court's description applies to the **Marschalk device**, over which the court then concluded that Leishman had made no patentable improvement. In the revised version, or second opinion (172 F. 2d 365, 367), which appeared after a rehearing was requested, the court changed the description to read on petitioner's tuner, and the reference to a "wing nut" and "a recess in the tappet" were eliminated.

c. When its first opinion was rendered, the appellate court also confused common spur gears with ratchet wheels, saying (79 USPQ at 319): "Movement of the shaft of the rocker (of the accused device) is communicated by ratchet gears to the shaft upon which the movable condenser plates are mounted." Ratchet wheels are not used to transmit motion from one such wheel to another, but rather to prevent a part from moving in a reverse direction excepting when the pawl is lifted. See cut in Webster's New International Dictionary, Unabridged. This was called to the appellate court's attention in "Appellee's Supplemental Brief in Support of Petition for Rehearing." In the revised, or second, opinion (172 F. 2d 365 at 368), the court changed the original term "ratchet gears" to "spur gears." Such

unfamiliarity with the subject and with mechanical matters in general, shows that the court was ill qualified to brush aside the expert testimony and make its own mathematical analysis of the unwanted movement in the prior art Marschalk tuner, as the court undertook to do in its third opinion, after petitioner had shown at the rehearing that respondent's expert witness (an associate professor of machine design at Northwestern University) had been unable to make such an analysis.

2. In the appellate court's third decision, instead of correcting its original errors and basing its new decision upon the record, the court went outside the record and attempted to justify its original conclusions by means of the aforementioned inept mathematical analysis. This analysis was erroneous because:

- a. The analysis had no basis in the record.
- b. The court made grievous mistakes in its analytical drawings, and then based its conclusions in large part upon these mistakes. (This particular reason why this Honorable Court should review the appellate court's opinion, was urged in the original petition as reason 1(b) for allowance of the writ. This reason is repeated here only so that it may be viewed in its relation to the other reasons which are here advanced for the first time.)
- c. The appellate court's conceptions of "levers" and "lever arms," aside from having no basis in the

expert testimony, are contrary to the principles taught in elementary texts in physics and mechanics for college and high school students, as hereinafter shown in the argument.

3. Had the appellate court given proper consideration to the expert testimony, it would have found excellent evidence of invention in the inability of respondent's expert witness to explain the causes of the prior art difficulties eight years after petitioner had solved them. The folly of Dr. Spott's explanation of the unwanted movement in the Marschalk tuner is readily demonstrated by his proposed drawings, as shown in the argument.

4. In ruling that petitioner's cure for the prior-art difficulty would have been apparent to any mechanic skilled in the art, the appellate court entirely overlooked the practical fact that it was **not** apparent to **any** of the skilled workers and trained engineers who struggled with the problem during the decade from 1928 to 1938.

5. The appellate court's reversal of the trial court on the issue of validity is a serious violation of Rule 52a which provides that findings of fact shall not be disturbed unless they are clearly in error or unsupported by evidence. The seriousness of this violation of Rule 52a is augmented by the fact that its effects are **not** confined to the instant case, but have a direct bearing upon the ultimate outcome of Ninth Circuit litigation, as will hereinafter be explained.

III.

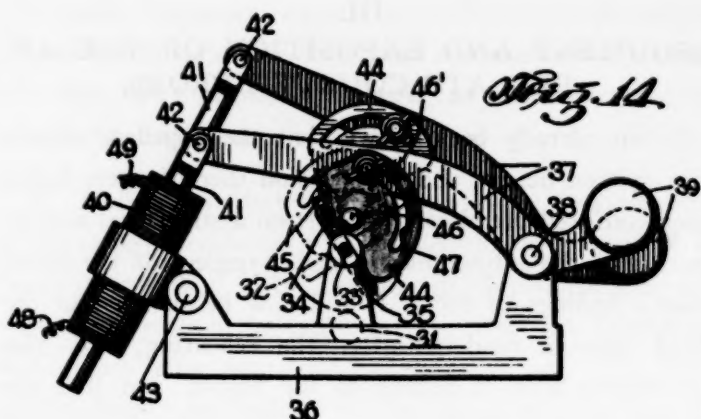
**ARGUMENT AND EXPOSITION OF THE APPELLATE COURT'S ERRORS.**

It has already been shown that the appellate court's first opinion herein, and the revision thereof, were based upon confused premises arising from a superficial consideration of the subject matter and a neglect of the lower court's findings of fact. It will now be shown that the third opinion, rendered after the rehearing, was also formulated without regard to the record, and that the appellate court resorted to a devious pseudo-scientific analysis to bolster its originally announced conclusions.

An appraisal of the appellate court's last opinion necessarily involves certain allusions to the record and to the purposes behind the combination covered by the claims here at issue. These claims cover the features of the invention that make push-button radio tuners easy to adjust or "set" so that the subsequent operation of the buttons will tune in the desired stations accurately.

**1. The Difficulty That Was Effectively Solved by Petitioner's Invention.**

The difficulty that needed to be overcome in order to permit easy setting, is well demonstrated in the prior art Marschalk tuner discussed in the opinions sought to be reviewed. Marschalk's patent, No. 2,072,897, appears in the record in Vol. II, pages 415 *et seq.* For the convenience of the court, Fig. 14 from the Marschalk patent is reproduced on the following page.



Marschalk's device employs a relatively long rocker 34 (colored green) mounted on a shaft which is operatively connected to the rotatable tuning control of the radio set. Only the end of rocker 34 shows in the figure. This rocker assumes a different tilt, or angular position, according to what station is tuned in. In order automatically to give this rocker the particular tilt required for each favorite station, Marschalk employs a series of tappets, or contacting plates, 44 each mounted on a pivot 46 carried by an operating lever 37. When any lever is depressed, its associated tappet 44 engages the long rocker and turns it to the same angular tilt as the tappet. The same rocker is used for all the tappets.

Before any operating lever and tappet may be used to tune in a given station, the tappet 44 (colored red) must first be adjusted, or set, to the proper angular tilt required for that particular station. Any tappet may be loosened for adjustment purposes by loosening the associated wing-



nut 46'.<sup>2</sup> The next step in the "setting" or adjusting process, is to tune in the desired station carefully by means of the regular manual knob (not shown). This causes the rocker 34, colored green, to assume a definite angular position. After the rocker has thus been accurately positioned, the operating lever 37 is pressed down so that the loosened tappet 44 engages the rocker, causing the tappet to assume the same angular position, or tilt, as the rocker. But if the rocker is near either of its extreme tilted positions, such as those shown respectively in full lines and dotted lines in the figure, a peculiar thing occurs: **The rocker and tappet both immediately flip around or "creep" away from the tilted position and tend to become horizontal.** Great care must accordingly be used in setting Marschalk's tappet. Sufficient pressure must be exerted on the operating lever to assure that the loosened tappet or adjustable means 44 will assume the exact angular position of the rocker, yet a slight excess pressure will immediately cause these parts to "creep" and destroy the careful setting of the rocker. A variation of a small fraction of one degree will destroy the accuracy of the adjustment. [R. 61-62.] If the operator is fortunate not to have disturbed the setting, the wing-nut 46' may be tightened and the tappet thus clamped in its proper adjusted position.

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<sup>2</sup>The first opinion (79 USPQ 316, at 318) described this as the method of loosening petitioner Leishman's tappet, but the method is peculiar to Marschalk's device, Leishman's structure and method being considerably different.

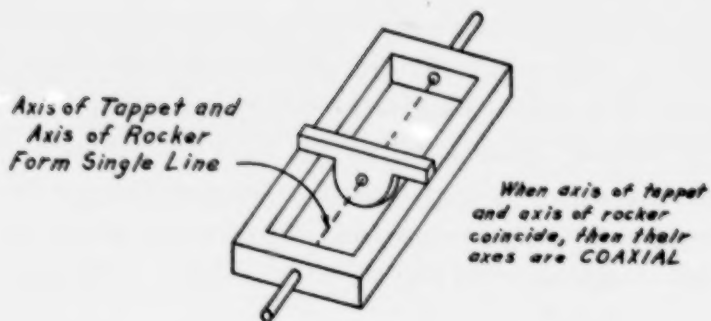
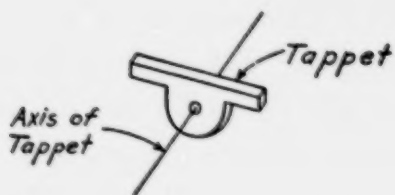
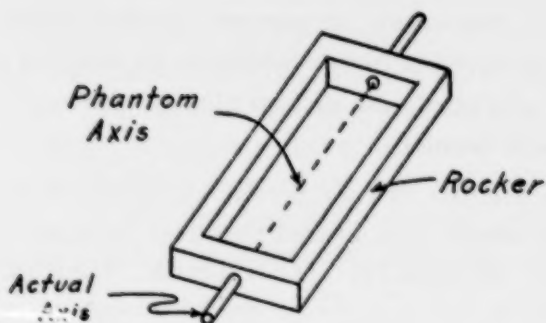
It will be obvious that any subsequent operation of the lever will cause the tappet to engage the rocker and turn it to the angular position for which the tappet was adjusted. But if the tappet has not been accurately adjusted, or if there was the slightest movement during the adjusting process, the subsequent operation of the lever will not tune in the station properly.

Before a satisfactory adjustable tappet tuner could be produced, it was necessary that the setting difficulty be solved and the creeping eliminated without introducing other undue complexities. Various workers in the art endeavored to provide an acceptable adjustable tappet tuner from 1928 until the issuance of petitioner's patent in 1938. Their devices either required many extra parts or involved tedious methods of adjustment.

Petitioner eliminated the creeping movement by the mere shape and relationship of the rocker and tappet, which were mutually arranged so that one could nest within the other in the fully engaged position in order that their axes of rotation might become coincident, or **coaxial**. The coaxial arrangement of the tappet and rocker are graphically illustrated in the drawings on page 11 hereof. For the sake of simplicity, the operating lever and the means for clamping the tappet in adjusted position are not shown in these figures. The coaxial relationship was shown in Fig. 2 of the patent in suit [R. 261] and described in the specification on page 264, lines 30 to 34.<sup>3</sup>

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<sup>3</sup>This structure was immediately adopted on a large scale, and approximately eight million such tuners were manufactured prior to April, 1942, when the manufacture of commercial radio receivers was stopped by federal order to facilitate concentration on the defense program. See finding of fact 25, quoted on page 36 hereof.



## 2. Nature of the Appellate Court's Errors.

A proper understanding of the fact that petitioner used the coaxial relationship to **prevent** rotation, shows the error of the appellate court's holding in its first two opinions that petitioner's use of coaxiality involved only mechanical skill because

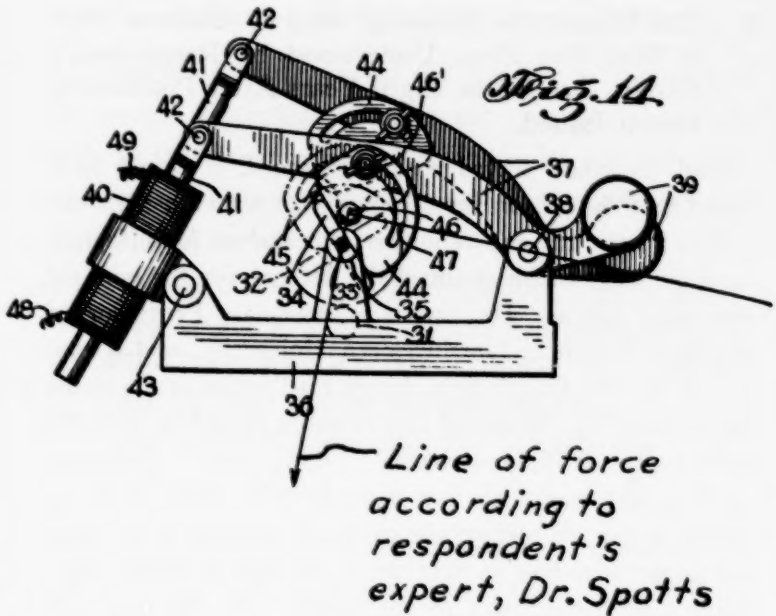
"The principle of coaxial relationship and its importance, **where it is desired that two parts of a machine OPERATE TOGETHER HARMONIOUSLY**, has been within the knowledge, for many years, of ordinary mechanics skilled in their art."  
(Emphasis added.)

In its third opinion, rendered after the rehearing, the appellate court did a right-about-face and sought to show that the **opposite** use—the **prevention** of movement in such a device—might come within the skill of a mechanic. This final opinion was also rendered without regard to the record and the findings. It contains erroneous statements about the testimony of respondent's expert, Dr. Spotts. It also indicates that the court was oblivious to most of the efforts made between 1928 and 1938 to solve the creeping problem, despite the lower court's findings on this matter. And the court's alleged analysis of the problem is foreign to anything in the record, as well as full of serious errors that render it valueless as the basis for an opinion.

3. **The Reason for Creeping Was so Obscure That It Was Not Even Understood by Respondent's Expert, Dr. Spotts, Eight Years After Petitioner's Patent Issued.**

Had the court stayed with the record, it would have found that the reason for creeping was not even apparent to Dr. Spotts, the expert witness for Galvin Manufacturing Company, which assumed the defense for the nominal defendant herein. Dr. Spotts is Associate Professor of Machine Design at Northwestern University, and a consultant for the Galvin firm, where his "duties are to assist the engineering, designing and research departments in the development of their products." [R. 168-169.] Respondent's expert was thus far more than a mere mechanic skilled in the art, and yet the cause of creeping was clearly not apparent to him at the time of the trial in 1946—eight years after Leishman's patent issued. Dr. Spotts' testimony was given in connection with the Marschalk tuner. To make it easy to follow his statements, another reproduction of Marschalk's Fig. 14 is provided on page 14 hereof, where additional lines have been added in accordance with Dr. Spotts' instructions. Dr. Spotts testified as follows [R. 213]:

"A. The direction of the force that will cause creeping can be found in the following manner: Draw a straight line from pivot 38 to pivot 46. [Such a line has been added to the figure.] Then draw another line at right angles to that line through pivot 46. [This line has also been inserted.] **The force will lie along that perpendicular line.** If it falls **to the left** of pivot 33 then the rotation of the rocker will be **counter clockwise**. If the perpendicular line on the other one falls to the **right** of pivot 33, then there will be **clockwise motion**." (Emphasis added.)



It will be seen, however, that the said line of force falls neither to the right nor to the left of the pivot 33, but exactly through the center of the pivot. According to Dr. Spotts' theory, there should thus be **no** rotation in the Marschalk device. But the appellate court recognized that there **is** rotation. If the right side of the **rocker** is **up**, there will be clockwise rotation; and if the **left** side of the rocker is **up**, there will be counter-clockwise rotation.

Regarding the foregoing testimony of Dr. Spotts, the appellate court's rehearing opinion incorrectly states [R. 581, bottom of page]:

"It is obvious that when the expert so testified he was talking about a force from pin A traveling along a straight line. In Marschalk's device, pin A travels in an arc."

This is another of the appellate court's unconsidered conclusions. The foregoing testimony of Dr. Spotts even refers to Marschalk's pivots 33, 38 and 46. It was thus Marschalk's device that Dr. Spotts was talking about, and he was explaining how he accounted for creeping in this particular device.

The court's statement continued, in further error:

" . . . But the fact that pin A moves in an arc to the right of vertical line XY is one cause of creeping in Marschalk's device."

The vertical line XY appears only in the court's drawing. The tappet pivot pin 46 is neither to the right nor left of the line of force to which Dr. Spotts referred. If it were to the right of **any** line, it would **always** be to the right of such line, and according to Dr. Spotts' theory the rotation would consequently always be **clockwise**. But such is not the case. If the **left** end of the rocker is up, the rotation is **counter clockwise**, although such angular position of the rocker in no way moves the lateral position of the tappet pivot.

The next sentence in the court's opinion is as follows:

" . . . The expert did not testify that it was the sole cause of creeping."

Yes, he did. On page 206, he testified:

" . . . If you make a drawing where you can show it exactly, you will see that the force is

directed at a slight angle over the pivot of the tappet, an angle which carries it not through the center of the rocker but a little bit to one side, and **this sidewise application of the force off the center of the rocker is THE reason why the rocker moves.**" (Emphasis added.)

Such a drawing is here provided, and we see instead that Dr. Spotts' line of force passes exactly through the **center** of the rocker. Manifestly, Dr. Spotts did not know what makes the rocker move during the adjusting process when the tappet and rocker are not co-axial. His testimony demonstrated that the real reason for creeping is very obscure and that more than mechanical skill was required in arriving at Leishman's simple cure.

What better demonstration could there be that petitioner's solution was beyond mechanical skill than the inability of respondent's own expert to explain it? The expert's unusual qualifications make the evidence all the more convincing. Before becoming Associate Professor of Machine Design at Northwestern University and a consultant for Galvin Manufacturing Company, he had taught at the University of Michigan and at Johns Hopkins University [R. 168]. Moreover, the thirteen month interval between the filing of the complaint and the beginning of the trial gave respondent every opportunity to think of valid reasons why petitioner's solution would have been obvious—if there were any such reasons.



But the appellate court overlooked the significance of Dr. Spotts' testimony and was apparently oblivious to the fact that no simple solution of the creeping problem was provided by any of the experimenters of record, other than Leishman, who tackled the problem during the decade from 1928 to 1938. Instead of heeding the trial court's findings along this line, the appellate court based its final opinion solely upon a pseudo-scientific analysis of its own.

**4. The Appellate Court's Drawing Contain Serious Errors That Misled the Court.**

The appellate court's analytical drawings [R. 578] are reproduced on page 21 hereof, together with two additional figures which petitioner has added for explanatory purposes. Figs. 1 and 2 are by the court; Figs. 3 and 4 by petitioner. The triangle J in Figs. 1 and 2 is supposed to represent the Marschalk tappet in contact with the rocker I. However, there is not much resemblance between this tappet and that of Marschalk. Fig. 2 illustrates the tappet and rocker when the latter is in a horizontal position, and Fig. 1 is intended to show the position of these parts when the rocker is tilted. The court uses Figs. 1 and 2 to explain how it thinks a mechanic skilled in the art would analyze the creeping problem and readily arrive at petitioner's solution.

Drawings intended to show different operative positions of parts of an instrument, can obviously be of no

dependable analytical value unless they are accurate. The drawings must show how the parts would actually appear in the positions to be studied. Inasmuch as the court concludes that a skilled mechanic would attach great significance to the relative positions of the pivots A and D as shown in the two figures and that such mechanic would attribute the cause of creeping to the unequal lengths of certain lines, it is very important to know whether the drawings are correct. To make this easy to determine, petitioner has provided a movable transparent plastic tappet constructed exactly like the tappet shown in the appellate court's Fig. 2. To prevent this tappet from being mislaid or lost, it is attached to one end of a cord, and the other end of this cord is affixed to the left edge of the page on which the appellate court's drawings are reproduced.

When this transparent tappet is superimposed on the tappet J of Fig. 2, it will be noted that the hole in the plastic tappet is exactly over the pivot A of the tappet in the figure. This should also be true of the tappet in Fig. 1 if the drawings are to be of any value. But if the pivot hole in the plastic tappet is placed over the pivot A in Fig. 1, it will be seen that the lower edge of the plastic tappet reaches only half way to the edge of the tappet in the figure. If the lower edge of the plastic tappet is placed in contact with the rocker in Fig. 1 and the pivot hole positioned very slightly to the right of line X-Y, as in Fig. 2, it will be seen that neither of the other edges of the tappet coincide and

that the court has placed its pivot about twice as far from the lower edge of the tappet as it ought to be. Yet the court bases its opinion upon the fact that the pivots A and D in Fig. 1 are so much further apart than in Fig. 2, a condition that prevails only because the court improperly drew them that way.

Says the court [R. 579, bottom of page]:

“When the rocker and the tappet are positioned as in figure 1, pin A is a greater distance above the axis of the rocker shafts and a greater distance to the right of the vertical line XY than when the rocker and tappet are positioned as in figure 2.”

At the bottom of page 580 of the record, the court concludes:

“Since the more the rocker is tilted the greater becomes the non-coaxiality between the axis of the rocker shafts and pin A and the greater becomes the tendency of the rocker to creep, and since, when the pin A approaches substantial coaxiality with the rocker shafts, creeping disappears, it is obvious that the problem can be solved by effecting substantial coaxiality between pin A and the axis of the rocker shafts, when the tappet is in full engagement with the rocker.”

The illogic of this is at once apparent when the tilted position, purportedly illustrated in the court's Fig. 1, is properly drawn. By checking with the plastic tappet, it will be seen that the parts are properly drawn in

Fig. 3, prepared by petitioner. The tilt of the rocker is exactly the same in petitioner's Fig. 3 as in the appellate court's Fig. 1. It will be noted that the separation between the pivots A and D in Fig. 3 is not perceptibly greater than in Fig. 2. The difference is so small that it must be determined geometrically by laying the figure out on a very large scale, or by calculating the difference by trigonometry. It is of the order of 5%. The actual distance between pivots A and D in Fig. 2 is  $7/32$ , or .2187, of an inch. Five per cent of this, as simple arithmetic will verify, is only .0109—or almost exactly  $1/100$  of an inch. The pivots would actually be, then, only  $1/100$  of an inch further apart when the rocker is tilted to the particular angle shown, than they are in the horizontal position. Even in the most extreme angular positions to which the rockers in these tuners may be turned, the difference in the separation of the axes is only a few hundredths of an inch.

The appellate court, however, shows a separation of  $13/32$  of an inch between the pivots in its Fig. 1. Reduced to decimals, this is .4062. This separation of .4062, pictured in Fig. 1, is 85% more than the separation of .2187 shown in Fig. 2, whereas the **actual** increase in separation, as verified by Fig. 3, is only 5%. In representing the increase as 85% instead of 5%, the appellate court has indicated the increase to be **17 times greater than it is**. The court has thus made an error of 1700%. This tremendous error is disastrous for petitioner, because the appellate court's conclusion

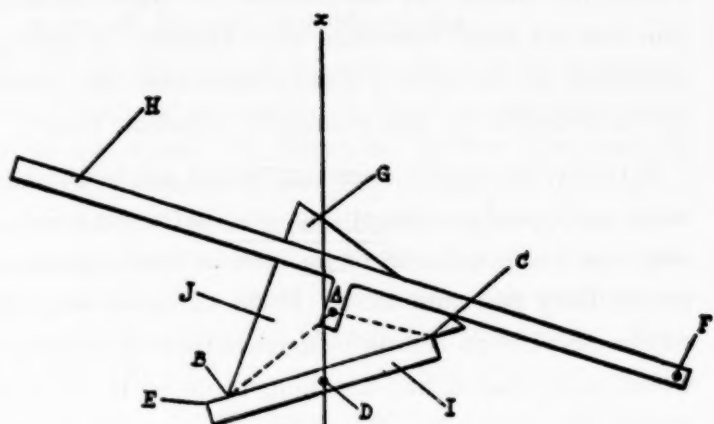


FIG. -1

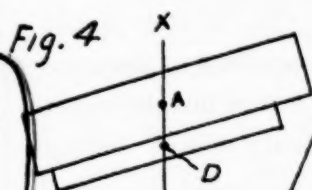


Fig. 3

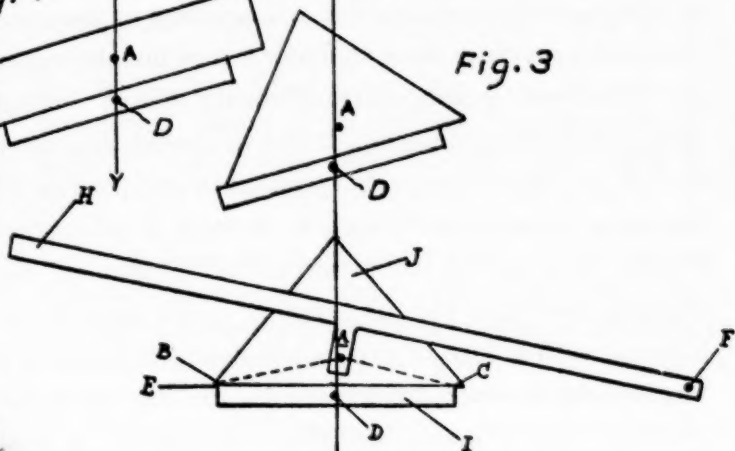


FIG. -2

that petitioner's cure for creeping would be obvious to a mere mechanic, was based upon the court's assumption that its inept drawings were correct. A judicial procedure of this type is totally untenable, and should not be tolerated by this Honorable Supreme Court.

Actually, the skilled mechanic would not be thinking about axes, and petitioner submits that a variation of only one one-hundredth of an inch in their separation would likely pass unnoticed. If the variation **were** observed, there is no reason to assume that the mechanic would think that it had anything to do with the cause of creeping. If such a thing did occur to him, it does not follow that he would surmise the difficulty might be eliminated by some specific arrangement of the axes. Should his investigations lead along that line, he might try numerous possible arrangements before hitting upon a coaxial relationship. If the mechanic were alert enough to notice the small variation in the position of the axes, attach significance to it, and then conduct experiments leading to a successful solution of the creeping problem, the "mechanic" would have to be inspired with a flash of genius. His contributions in a virgin field would certainly rise to the dignity of invention. Had the appellate court considered the trial court's findings, it would have learned that the ten-year investigations of other experimenters led them along entirely different paths.

5. The Appellate Court's Conception of "Leverage" and "Levers" Is Contrary to Elementary Principles of Physics and Mechanics.

There are many other serious errors in the appellate court's analysis of creeping. Despite what the court had to say about the distances between the axes, it attributed the **cause** of creeping to unequal "leverage," and to "levers" of unequal lengths. The court's conception of these terms, when they apply to the application of forces, is highly erroneous and contrary to elementary teachings of physics and mechanics. Says the court [R. 580]:

" . . . the distance from the axis of the rocker shafts to the point on edge C of the upper face of the rocker where the base of the tappet intersects such edge, referred to hereinafter as point P, is greater than the distance from such axis to point B. Hence, the **lever** from point P to the axis of the rocker shafts is longer than the **lever** from point B to such axis, and the **lever** from point B to pin A is longer than the **lever** from point O to pin A. As a result, when force is exerted by downward pressure of the lever H through the tappet upon the face of the rocker, the downward force at point O has the advantage of greater **leverage** than the downward force at point B, and the resisting force of the rocker at point B has the advantage of greater **leverage** than the resisting force of the rocker at point O."

The court's errors with respect to "levers" and "leverage" are among the first which students are cautioned against in elementary courses in mechanics and physics. The lever arms that determine the effect of

forces do not extend from the axis to the point where the force acts, as the court has drawn them. The court's errors in this respect are easily shown by referring to elementary text books. The folding insert between pages 26 and 27 hereof contains a reproduction of the pertinent pages from two such texts. The page reproduced at the left is from "Mechanics" by John W. Breneman, C. E., Associate Professor of Engineering Mechanics, prepared under the direction of the Division of Engineering Extension of the Pennsylvania State College and published in 1941 by McGraw-Hill Book Company, Inc. of New York and London. The text shows that the laws applying to lever arms are universal, the same laws applying to straight levers and even to bent levers. Regarding the latter, the text says: ". . . great care must be taken to determine the true length of the lever arms. In **every** case the **true length** of the lever arms will be the **PERPENDICULAR distance** between the fulcrum and the line of the force or weight." (Emphasis added.) Fig. 61 lucidly illustrates exactly what that means, and the text says, "Thus, in Fig. 61, L is the lever arm for the acting force P and L' is the arm for the reacting weight W." These lever arms do not extend from the axis or fulcrum to the point where the force acts, as the Court of Appeals for the Tenth Circuit drew them in Figs. 1 and 2 of its final opinion, but **always at right angles** from the **line** of force to the fulcrum or pivot. If Fig. 61 had been drawn according to the appellate court's theories, the lever arm L' would have been drawn from the axis or fulcrum to the pin where the weight W is suspended, and the lever arm L would extend from the fulcrum to the



point where the force  $P$  is applied. The appellate court's error is thus the very error which the author expected of new students and which the text and Fig. 61 were prepared to guard against.

The printed page that is reproduced at the right of the one just discussed, is from "New Practical Physics," long used as a text in the high schools of the Los Angeles school system. This text was published in 1929 by The Macmillan Company, of New York, and was written by Newton Henry Black, Assistant Professor of Education at Harvard University, and Harvey Nathaniel Davis, President of Stevens Institute and formerly Professor of Mechanical Engineering of Harvard University. Here again the moment arms, or lever arms, are shown in the portions marked to be "the **perpendicular** distance of its [the force's] line of action from the fulcrum"; and the turning effect, or "moment," of a force is "the product of a force and its **perpendicular distance from the fulcrum.**" Thus, in Fig. 20, the moment, or lever arm, of the force  $D$  is **not** the distance from the pivot  $F$  to the point  $A$  where the force is applied, as the appellate court's theory would have it, but rather the line from  $D$  to  $F$ , which is at right angles, or **perpendicular**, to the line of the force.

That these lever arms, or moment arms, must extend **perpendicularly** from the line of force to the fulcrum is further shown by the definitions of pertinent terms in Webster's New International Dictionary. Thus, **moment** is defined as "8. Mech. Tendency, or measure of tendency, to produce motion, esp. about a point or axis. It is measured in general by the product of a

mass, force, velocity, or the like, into a **perpendicular distance from or to the point or axis.**" Also, **moment of a force is defined as** "Mech. a with respect to a point, the product of the magnitude of the vector and the perpendicular distance from the point to the line of direction."

The appellate court's conception of a physical lever as the true measurement of the distance at which a force acts, thus has no basis in mechanics or physics, and the court does not claim that there was any such analysis in the record.

The record does contain, however, two models which prove there is no merit in the theory that creeping in Marschalk's device is caused by the fact that the pivot of the tappet in the court's drawing is to the right of a vertical line, or by the unequal distances from the rocker pivot D to the two points B and C in the court's drawings, to which the court attached significance. These models are illustrated in Fig. 4, drawn on the left of the reproduction of the court's drawings on page 21 hereof. The rocker shown is Plaintiff's Physical Exhibit 26-b and the tappet is Plaintiff's Physical Exhibit 26-a. It will be noted here that the tappet overlaps both ends of the rocker. The pivot A of the tappet moves exactly on the vertical line; and the distance from the rocker pivot D to the far points of contact with the tappet, are exactly equal. Operation of these exhibits shows that creeping from extreme tilted positions nevertheless occurs.

of these effects equal to the turning effect of the upward pull, or effort,  $E$  (Fig. 19). That is,

$$W_1 \times BF + W_2 \times AF = E \times CF$$

where the distances  $CF$ ,  $BF$ , and  $AF$  are measured perpendicularly to the lines of action of the forces.

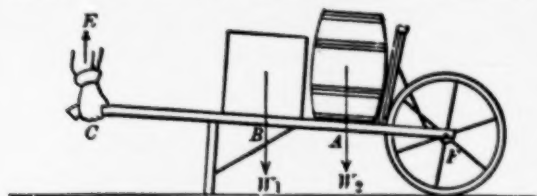


Fig. 19. Wheelbarrow with two weights.

line of action from the fulcrum, and by making the sum of these products equal to the product of the effort by the perpendicular distance of its line of action from the fulcrum.

**21. Principle of moments.** It has been seen that the turning effect of a force depends on two factors — the amount of the force and the distance of its line of action from the fulcrum. The product of a force and its perpendicular distance from the fulcrum is called the moment of the force.

FOR EXAMPLE, let  $AF$  (Fig. 20) be a rigid bar which can rotate about  $F$ . The moment of the force  $B$  applied at  $A$  is equal to  $B$  times  $FA$ ; and the moment of force  $C$  is equal to  $C$  times  $FD$ . If  $B$  equals  $C$ , which is the greater moment?

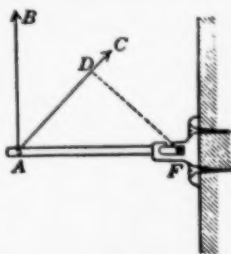


Fig. 20. Moment of a force equals force times its perpendicular distance from fulcrum.

In general, for a lever to be in equilibrium, *the sum of the moments of the forces tending to turn it in one direction (clockwise) must equal the sum of the moments of the forces tending to turn it in the opposite direction (counterclockwise).*

**22. Force at the fulcrum.** In the case of the man with the shovel (Fig. 16), we have called his left hand the fulcrum. But it is quite as evident that this hand must exert a force — in this case, a downward push — as that the other hand must pull up.

is placed between the fulcrum and the force, as in Fig. 59, it is known as a lever of the second class. Again, if the force  $P$  is placed between the fulcrum and the weight, as in Fig. 60, there results a lever of the third class. The relation between force,

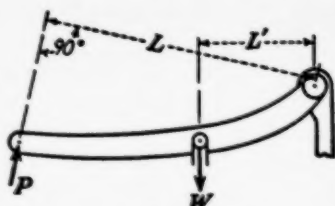


FIG. 61.

weight, force arm, and weight arm, holds true for each class of levers, that is, in every case  $PL = WL'$ .

The laws that govern the straight lever also apply to the bent lever. In the case of the bent lever, however, great care must be taken to determine the true

length of the lever arms. In every case the true length of the arms will be the perpendicular distance between the fulcrum and the direction line of the force or weight. Thus, in Fig. 61,  $L$  is the lever arm for the acting force  $P$  and  $L'$  is the arm for the reacting weight  $W$ .

In this figure, if  $L = 30$  in.,  $L' = 8$  in., and  $P = 60$  lb., then to find the weight that can be raised,

$$PL = WL'$$

or

$$60 \times 30 = W \times 8$$

$$W = 225 \text{ lb. Answer}$$

A simple machine which is based on the lever principle is called the **wheel and axle**. By wrapping ropes around two different sized drums of radii  $R$  and  $r$  (Fig. 62) we find that the pull  $P$  necessary to raise the weight  $W$  can be determined. The drums are fastened together on a shaft  $O$  so that the center of the shaft becomes the fulcrum, or axis of rotation. Then, by the principle of moments, the moment of the pull  $PR$  equals the moment of the weight  $Wr$ , or

$$PR = Wr$$

In the above figure, let  $W = \frac{1}{2}$  ton;  $r = 3$  in.; and  $R = 18$  in. What pull  $P$  is required to lift the weight?

$$\frac{1}{2} \text{ ton} = \frac{1}{2} \times 2000 \text{ lb.} = 1000 \text{ lb.}$$

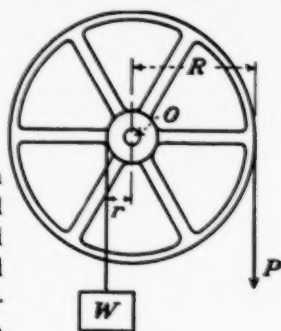


FIG. 62.





6. In Reversing the Lower Court, the Court of Appeals Disregarded the Record and the Findings of Fact.

Perhaps the appellate court's greatest error was in its **method** of deciding the appeal. Even if the court, in retrospect, had been able to produce a correct analysis of the causes of creeping, such belated analysis would not prove that a cure would have been apparent to a mechanic unfamiliar with Leishman's teachings. Instead of going outside the record into unfamiliar branches of scientific analysis in order to decide artificially what a skilled mechanic **might** do, the court should have considered the evidence and the trial court's findings as to what the skilled mechanics actually **did** do—unless, perchance, these findings were clearly in error.

But the appellate court did not say they were in error; it apparently overlooked them entirely.<sup>4</sup>

Let us look at some of the undisputed facts as found by the trial court.

The following findings were particularly pertinent in this regard:

"18. There had been a demand in the radio industry for many years for a satisfactory automatic

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<sup>4</sup>The importance of a trial court's findings in this respect was heavily stressed by this Honorable Supreme Court in its most recent patent case—*Graver Tank & Mfg. Co., Inc. v. Linde Air Products Co.*, 69 S. Ct. 535, 537, 538; 50 USPQ 452.

tuner; and numerous inventors in the United States and foreign countries sought to satisfy this demand by devices described in patent applications dating as far back as 1924. [R. 30-31.]

"19. Schaefer, Exhibit 20, Marschalk, Exhibit 18, Lane and Mackey, Exhibit 22, and Soffietti, Exhibit 21, in Italy all tried to produce acceptable tuners using an adjustable tappet, but their tuners were all either more complex or much harder to adjust than plaintiff's simple structure." [R. 31.]

Manifestly, plaintiff's simple solution of the problems of adjustable tappet tuners was **not** apparent to skilled mechanics and engineers who actually tackled the problem. The appellate court's unwarranted speculations are thus at variance with the practical facts.

#### **7. The Findings of the Trial Court Were Supported by an Abundance of Evidence.**

The trial court's findings of fact were well supported by abundant evidence. Regarding the Marschalk device mentioned in Finding 19, the appellate court's own opinion leaves no doubt that it provided no answer to the problem of creeping. Yet Marschalk's patent [R. 415 *et seq.*] shows that he was far more than a mere mechanic. But the difficulties baffled still other mechanics both before and after Marschalk. These difficulties were naturally encountered by every experimenter who undertook to position a rotatable control by means of adjustable tappets.



In other arts, **fixed** tappets had long been used to turn rockers to exact angular positions.<sup>5</sup> But in these other arts, the required angular position was always the same, and the manufacturer was therefore able to form the tappet at the required angle and make it an integral part of the operating member. In the radio art, however, the large number of broadcasting stations requires hundreds of different tappet positions, and the tappets consequently must be adjustable so that they may be set for the favorite stations of each individual purchaser. The **fixed** tappets of the prior art were naturally brought into direct contact with the rotatable member. When inventors tried to use **adjustable** tappets in order to adapt the tappet idea to the requirements of automatic tuning, it was likewise natural to attempt to apply these directly to the rotatable member. The Marschalk device, however, shows what all the experimenters ran into when they tried

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<sup>5</sup>Before the days of electric clocks, fixed tappets were used in electrically controlled devices to re-set a number of clocks every hour by means of an impulse from a central source. Such an arrangement is shown in Fig. 1 of Kettell's patent [R. 283] where the tappet E engages the rocker D attached to the hour hand. This tappet was an integral part of the lever, because it did not need to be adjusted to bring the minute hand to predetermined different positions. The required position was always the same. The minute hand had to be brought exactly to XII.

Fixed tappets were also used in cash registers, as shown in the Woodbridge patent [R. 297] and the patent to Miller [R. 397]. In such cash register devices, it was required that a rocker be turned to any one of ten positions, representing the digits from 1 to 9 and zero. Woodbridge used a different lever  $c^1$  for each position, but each lever had a tappet  $c^2$  formed on the inner end at a different angle for moving the rocker d to respectively different angular positions.

the direct approach. The creeping difficulty thus faced experimenters long before Marschalk, whose mechanism is significant only because it exhibits the problem in the raw—minus any of the previous or later attempts to solve it.

The first inventor mentioned in Finding 19, *supra*, was Schaefer. He was probably the first experimenter to try to eliminate creeping. His patent No. 1,906,106, will be found in Vol. II of the record, beginning on page 355. It will be noted that his patent application was filed in 1928. The Zenith Radio Corporation used Schaefer's mechanism in some of its sets somewhere between 1928 and 1930 [R. Vol. I, p. 66]. Regarding this early attempt to eliminate creeping, respondent's expert, Dr. Spotts, gave the following testimony in response to the questions of respondent's attorney, Mr. Mueller [R. 205-206]:

"Q. (By Mr. Mueller): Having the commercial tuner of Zenith available which was on the market for a period of one or two years in the radio industry and having the Schaefer patent available which has been issued since 1933, in that commercial device in the Schaefer patent, do you find a consideration of the problem of creeping in the tuner? A. The drawings and device are both made so there can be no creep.

Q. In other words, that designer did recognize creepage and he found a solution to prevent creepage. Is that correct? A. That is the conclusion I would draw.

Q. That is, creepage is prevented in Schaefer?  
A. Yes, sir."

Schaefer eliminated creepage by eliminating the rocker and substituting ten other movable parts requiring 8 guides. This made a total of 18 extra parts.<sup>6</sup>

In view of its holding that petitioner's solution of the creeping problem would be obvious to a mechanic skilled in the art, the appellate court makes a rather amazing reference to the Schaefer patent. Said the court [R. 582]:

“\* \* \* Indeed, he [Dr. Spotts] testified that where the rocker is mounted on a rotatable shaft, rather than as in the prior art patent to Schaefer No. 1906106<sup>1</sup>, substantial coaxiality between the axis shafts and pin A would be necessary to avoid creeping.”

Its footnote 1 to which the court here refers, reads as follows:

“<sup>1</sup>Schaefer, instead of using rockers, employed pairs of vertically disposed, reciprocal racks, which moved in guides by means of levers and tappets.”

Although Dr. Spotts was not able to analyze the causes of creeping, he was nevertheless familiar with Leishman's cure and he therefore knew that when a rocker is used, “substantial coaxiality between the axis shafts and pin A would be necessary to avoid creeping.” But manifestly Schaefer or the other Zenith engineers did not know that creeping could be cured in so simple a manner, or they would not have used the 18 extra parts.

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<sup>6</sup>These extra parts in Schaefer's tuner are enumerated on the folding insert at the back of this petition, where Fig. 3 from Schaefer's patent is reproduced.

In this regard, Leishman on August 27, 1937, wrote the Patent Office during the prosecution of his original patent application:

" . . . no engineer would use eighteen interrelated parts if ordinary engineering skill would make it obvious that one part would do the work. Furthermore, thousands of Schaefer's devices were manufactured and widely used, and engineers were employed to simplify the construction. This is additional evidence that applicant's improvement is an invention entitled to protection within the scope of the claims."  
[Dft's. Physical Exhibit OO, p. 14.]

The Patent Office thought so too, for it granted Leishman's patent. But this necessary corollary escaped the Court of Appeals.

The third, fourth and fifth inventors considered in Finding 19 were not even mentioned by the appellate court.

The third and fourth were Lane and Mackey. Their patent application No. 177,163 was filed on November 29, 1937 [R. 68], while petitioner's simple solution of their problem was still locked within the files of the Patent Office.<sup>7</sup> The pertinent drawings from their application are in the record as Plaintiff's Exhibit 22 [R. 475], and one of the figures is reproduced at the lower right of the folding insert at the back of this petition.

Lane and Mackey have a rocker 11-12-13 (colored green in the figure) and a tappet 19-20 (colored red). To avoid creeping, these inventors go to great extremes. It will be observed that their tappet is never freely pivoted

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<sup>7</sup>The heading to the first page of the specification of the reissue patent here in suit explains that the original patent issued on February 15, 1938, and that it was a division of an application filed on December 15, 1934.

and that it can be rotated only by the worm 46, which has threads that fit between the teeth 49 that are formed on the periphery of the tappet.

To adjust Lane and Mackey's tuner, one must first press the button 30 inwardly until the tappet, shown in red, engages the rocker, colored green. This causes the rocker to turn until it assumes the same angular position as the tappet, because the tappet is always locked against free rotation by the threads of the worm 46 that mesh with the teeth around the tappet. The end of a screw driver is then inserted into the screw-head 51, which is attached to the worm 46. When the screw driver is turned, the worm 46 is rotated, causing the tappet to turn the distance from one tooth to another every time the worm makes a complete revolution. If this is done while the tappet is in engagement with the rocker, the rocker will, of course, turn with the tappet. Consequently, by constantly turning the screw driver, the tappet and rocker may be slowly rotated until the desired station is tuned in, and the tappet will then be properly adjusted. Whenever this tappet is again pressed into engagement with the rocker, the latter will assume the same angular position as the adjusted tappet, and the station for which it was adjusted will again be tuned in.

Inasmuch as Lane and Mackey's tappet is never free to turn, the difficulties exhibited in Marschalk's tuner are avoided. But the adjustment of Lane and Mackey's tappet is manifestly a slow and laborious process. Petitioner's simple solution was clearly not apparent to these inventors.

The fifth inventor mentioned in Finding of Fact 19, was Soffietti. His original application was filed in Luxembourg on January 25, 1938 [R. 463], less than a month

before the issuance of Leishman's original patent, and ten years after Schaefer filed his application.

Soffietti's patent discloses another crude and complicated solution of the creeping problem. His Fig. 6 appears in the upper right corner of the folding insert at the back of this petition.

Soffietti's rocker has been colored green, and it will be noted that he uses two different tappets (colored red), **each** of which has to be independently adjusted in accordance with the angular position of the rocker. The creeping difficulty exhibited in Marschalk's tuner has been avoided in Soffietti's device, but his mechanism has so many other setting difficulties that his over-all improvement is slight. Five separate steps are required to set the tappets. As can be seen in Fig. 1 of Soffietti's patent [R. 459], his tappets 6' and 6'' are screws. The distance that each one protrudes may therefore be adjusted by screwing them in or out of the operating button 5. Referring again to Soffietti's figure on the folding insert at the back of this petition, it will be obvious that the lower tappet 6'' cannot be rotated for this purpose unless the upper tappet 6' is first retracted so that it will not be in the way of the off-set portion of tappet 6'' when the latter is turned. In adjusting these tappets for a given station, the following procedure must therefore be followed: First, the upper tappet 6' must be retracted. Second, the lower tappet 6'' must also be retracted. Third, the desired station must be tuned in by the manual knob (not shown), so that the rocker, colored green, will assume the corresponding angular position. Fourth, the lower tappet 6'' must then be screwed out so that when the off-set portion is down, as shown in the figure, the end of the tappet will just engage

the rocker. And fifth, the upper tappet 6' must be screwed out until it also engages the rocker.

It will be obvious that this arrangement circumvents the difficulty encountered in the Marschalk tuner, because the rocker is contacted on both sides of its rotational axis by two different tappets, instead of by a single integral tappet that is freely pivoted during the adjusting process. But Soffietti's tuner is a tedious and difficult thing to adjust. Soffietti clearly did not find the problem as easy to solve as the appellate court supposed. But Soffietti was faced with the actual problem, not with its solution.

Finding 19 of the trial court was clearly supported by substantial evidence.

There is no record that it ever occurred to anyone other than Leishman, that creeping could be avoided without the introduction of extra parts merely by the shape and arrangement of the tappet and rocker. There is no record that anyone, other than Leishman, ever made a correct analysis of the causes of creeping. And there is no evidence that anyone, other than Leishman, ever used a coaxial relationship for the prevention of rotation, as the trial court found in Finding of Fact 14, quoted on page 3 hereof.

Other pertinent findings of the trial court were as follows:

"21. In the summer of 1937, the radio industry was using to a great extent automatic tuners referred to as motor driven tuners and telephone dial tuners. These were so inaccurate mechanically that they required expensive automatic frequency control circuits to make them at all acceptable to the trade. . . ."  
[R. 31.]

\* \* \* \* \*

"25. Early in the year 1938 [when Leishman's patent issued], radio set manufacturers and radio parts manufacturers began to use radio tuners embodying the invention covered by claims 7, 8, 9, 10 and 11 of the reissue patent in suit. Tuners of this kind were supplied to the public in approximately 8,000,000 radio sets up to April, 1942. These tuners were sufficiently accurate mechanically to operate satisfactorily without the need of automatic frequency control circuits, and were easy to adjust to different broadcasting stations. The popularity of the motor driven and telephone dial tuners declined after 1938, and are now virtually obsolete." [R. 32.]

In two recent patent cases, some of the members of this Honorable Supreme Court held that the long failure of others to present a satisfactory solution to a problem, together with the immediate adoption and commercial success of the solution when it appeared, constitute evidence that such solution involved invention. The other members of the court held that this is not the case if the principle of the patentee's solution had previously been used for a similar purpose in an analogous art. In *Goodyear Tire & Rubber Co., Inc., v. Ray-O-Vac Co.*, 321 U. S. 275, the justices holding the latter view were in the minority. In *Jungersen v. Ostby and Barton Company et al.*; *Ostby and Barton Company et al. v. Jungersen*; *Jungersen v. Baden et al.*, 69 S. Ct. 269, the justices holding this view were in the majority. In the **instant** case there is **no record** of an **analogous** use of a coaxial relationship in **any** art at **any** time. The uncontroverted findings of the trial court on this point were as follows [R. 30]:

"13. The **coaxial** relationship between the axis of the tappet, or adjustable means, and the axis of



the rocker is for the purpose of preventing any rotation whatever of the adjusted tappet and rocker during the adjusting process. Coaxiality has been used in the past for the opposite purpose of permitting parts to move freely and without binding.

"14. The defendant presented no example of the use of a coaxial relationship that was at all analogous to the use made of this relationship in the combination set forth in the claims of the reissue patent in suit; and defendant's expert, Dr. Spotts, stated on cross-examination that he knew of no instance in which a coaxial relationship had been used for a similar purpose." (Emphasis added.)

In the instant case we thus have a device that responds to the tests of invention prescribed by all the justices of this Honorable Supreme Court. It is therefore untenable that the claims should be held lacking in invention just because the Court of Appeals for the Tenth Circuit has concluded by inaccurate drawings and a pseudo-scientific analysis, having no basis in the record, that the reasons for creeping can be ferreted out in retrospect.

In the face of the trial court's findings of fact and the admission of Dr. Spotts, it is a gross violation of Rule 52(a) for the appellate court to reverse the lower court upon nothing more substantial than rash assumptions and the reviewing tribunal's inept mathematical analysis, which it has substituted for the evidence. Such an unwarranted departure from the accepted and usual course of judicial proceedings should neither be condoned nor tolerated, and this Honorable Supreme Court should accordingly exercise its supervisory powers as provided in Rule 38(5b).

8. Had the Appellate Court Not Improperly Reversed the Lower Court on the Issue of Validity, It Is Clear From Footnote 3 of the Appellate Court's First Opinion That It Would Have Held the Claims Infringed, Thus Creating Strong Grounds for a Review by This Honorable Supreme Court of a Ninth Circuit Opinion in Which the Tuners Here Accused Were Held Not to Infringe Because They Are Operated by Plungers Rather Than Levers.

The appellate court's improper action herein is all the more serious because it has repercussions in other cases. Had the appellate court not erroneously reversed the lower court on the issue of validity, it is clear from an examination of the citations in footnote 3 in the first and second decisions herein [R. 502], that the court would have affirmed the lower court in its holding of infringement. This would have created a clear and direct conflict with two decisions of the Court of Appeals for the Ninth Circuit, where the same tuners here accused were freed of the charge of infringement on the single ground that the operating plungers are not equivalents of the operating levers shown in the patent.<sup>8</sup> It thus appears that the action of the Court of Appeals for the Tenth Circuit in the instant case has had the additional effect of depriving petitioner of a review by this Honorable Supreme Court of the Ninth Circuit decisions on the ground of a conflict between Courts of Appeals for the Ninth and Tenth Circuits on the issue of infringement.

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<sup>8</sup>The most recent of these Ninth Circuit cases was *Leishman v. Radio Condenser Company et al.*, Supreme Court case No. 372, October term, 1948.

**Conclusion.**

It is respectfully submitted that the decision of the Court of Appeals for the Tenth Circuit herein is such a radical departure from establish judicial procedure and the requirements of Rule 52(a), F. R. C. P., as to call for a review by this Honorable Supreme Court under its Rule 38(5b).

JOHN FLAM,

*Attorney for Petitioner.*

**Certificate.**

This petition is in my judgment well founded, and is restricted to grounds specified by Rule 33(2), and is not interposed for purposes of delay.

JOHN FLAM,

*Attorney for Petitioner.*

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U.S. Supreme Court  
**FILED**  
MAY 31 1949  
CHARLES ELMORE CROFT  
CLERK

IN THE  
**Supreme Court of the United States**

OCTOBER TERM, A. D. 1948.

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**No. 612**

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LEROY J. LEISHMAN,

*Petitioner,*

*vs.*

THE RICHARDS AND CONOVER COMPANY,  
A CORPORATION,

*Respondent.*

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**BRIEF FOR RESPONDENT IN REPLY TO PETITION  
FOR REHEARING OF ORDER ON PETITION FOR  
WRIT OF CERTIORARI.**

✓  
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Nothing has changed in the instant case since this Court on April 18, 1949, denied the petition for writ of certiorari by petitioner herein. Petitioner was unable in his original petition for writ of certiorari to show any basis for review by this Court under the provisions of Supreme Court Rule 38 (5b). No reason or ground for the grant of certiorari is set forth in the present petition for rehearing. In fact, nothing has changed with reference to decisions and the petitioner's position so far as a basis for granting certiorari is concerned, since this Court on February 28, 1949, denied this same petitioner a rehearing on his petition for a writ of certiorari in *Leishman v. Radio Con-*



*denser Company and General Instrument Corporation, No. 372.*

Petitioner has abandoned in his present petition his original and unsuccessful attempt to try to show a conflict between decisions (see footnote) of the Ninth Circuit and the Tenth Circuit Courts of Appeal as a basis for the granting of certiorari. As respondent showed in its original reply brief in the instant case, there is no such conflict, for the decisions are adverse to the patent in suit. The accused radio tuner structures in suit, so far as the merits of the various cases are concerned, were identical in the two cases carried through the Ninth Circuit Court of Appeals,<sup>1, 2</sup> and the instant case which came up through the Tenth Circuit Court of Appeals.<sup>3</sup> The Ninth Circuit Court of Appeals held that these structures did not infringe the patent in suit, but did not pass upon validity, and the Tenth Circuit Court of Appeals held the patent invalid for want of invention.

The present petition for rehearing narrows down simply to a more voluminous complaint by petitioner than he presented in his original petition for certiorari against alleged mechanical errors in the illustrative diagram accompanying the opinion of Judge Phillips on rehearing. The same general point argued in a few pages in petitioner's brief on his petition for certiorari, is now spread over the greater part of the thirty-nine pages in his petition for rehearing. Respondent on pages 3 and 4 of its original brief herein replied to this, and again submits that the alleged errors in immaterial mechanical details in no way affects the Ap-

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1. *Leishman v. Associated Wholesale Electric Co.*, C. C. A. 9, 137 F. 2d 722 (also see 36 F. Supp. 804).

2. *Leishman v. Radio Condenser Co., and General Instrument Corp.*, C. C. A. 9, 167 F. 2d 890.

3. *Leishman v. Richards & Conover Co.*, C. C. A. 10, 172 F. 2d 365.

pellate Court's conclusion of want of invention and invalidity of the patent in suit. It is expected that each such petitioner to this Court does disagree with, and complain of, the decision from which he seeks to appeal. But in the instant case this in now way comes within the reasons, as set forth in Rule 38 (5b), upon which certiorari is granted.

In passing, respondent wishes to comment on one repeated reference by petitioner which may be confusing. On pages 2 to 9, inclusive, of the instant petition for rehearing, he refers in one way or another to "three decisions" or "opinions" of the Tenth Circuit Court of Appeals. There was only *one* decision on the appeal, and *one* decision on the rehearing on appeal in the Tenth Circuit Court of Appeals, the latter in no way changing the *first* decision on appeal that the patent is invalid. The original and principal decision was rendered on November 15, 1948, and the decision on rehearing was rendered January 20, 1949. The opinions are reproduced in the Record (p. 497, and p. 576), filed herein, and certified by the Clerk of the Tenth Circuit Court of Appeals under date of February 14, 1949 (R, p. 583). In the original opinion the Appellate Court held (R, p. 504):

"that claims 8, 10, and 11 did not constitute invention over Marschalk and that all of the claims in suit were anticipated by Marschalk."

On rehearing, that Court adhered to the views expressed in its former opinion, and entered judgment remanding the cause with instructions (R, p. 582):

"to enter a decree adjudging the claims in suit invalid for want of invention."

Respondent respectfully submits that there is no basis for a rehearing of this Court's denial on April 18, 1949,

of petitioner's original petition for writ of certiorari, and the present petition should be denied.

Respectfully submitted,

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